



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**EVEY T**  
Machine Id  
[EVEY T] 003 558474-3  
Component  
**Starboard Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (312 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0070783</b>	MW0070772	MW0070775
Sample Date		Client Info		<b>01 Jul 2024</b>	01 Jun 2024	01 May 2024
Machine Age	hrs	Client Info		<b>20670</b>	19992	19204
Oil Age	hrs	Client Info		<b>20670</b>	19992	19204
Filter Age	hrs	Client Info		<b>20670</b>	0	375
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	None	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>18</b>	17	19
Chromium	ppm	ASTM D5185m	>8	<b>3</b>	3	3
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>3</b>	2	1
Lead	ppm	ASTM D5185m	>18	<b>9</b>	8	9
Copper	ppm	ASTM D5185m	>80	<b>24</b>	22	23
Tin	ppm	ASTM D5185m	>14	<b>8</b>	8	9
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

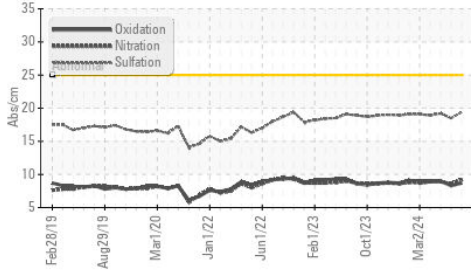
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	<1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.6</b>	1.3	1.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	8.6	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.4</b>	18.5	19.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

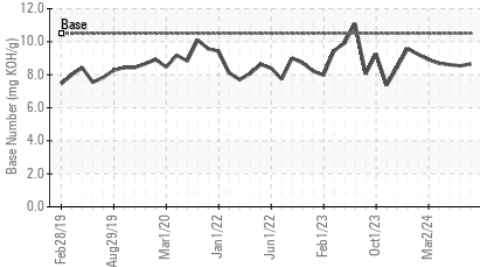
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<b>1</b>	2	3
Boron	ppm	ASTM D5185m		<b>49</b>	45	45
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>51</b>	48	48
Manganese	ppm	ASTM D5185m		<b>5</b>	3	3
Magnesium	ppm	ASTM D5185m		<b>29</b>	13	13
Calcium	ppm	ASTM D5185m		<b>3582</b>	3432	3524
Phosphorus	ppm	ASTM D5185m		<b>34</b>	16	8
Zinc	ppm	ASTM D5185m		<b>25</b>	8	22
Sulfur	ppm	ASTM D5185m		<b>2391</b>	2494	2756
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.7</b>	8.3	9.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>8.65</b>	8.54	8.61
Visc @ 100°C	cSt	ASTM D445	15.5	<b>15.1</b>	14.9	14.9

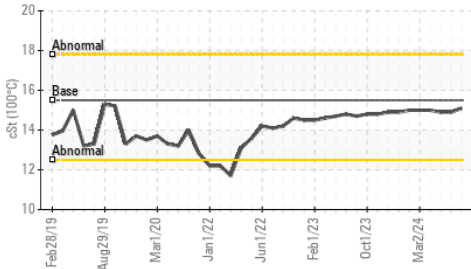
**FT-IR (Direct Trend)**



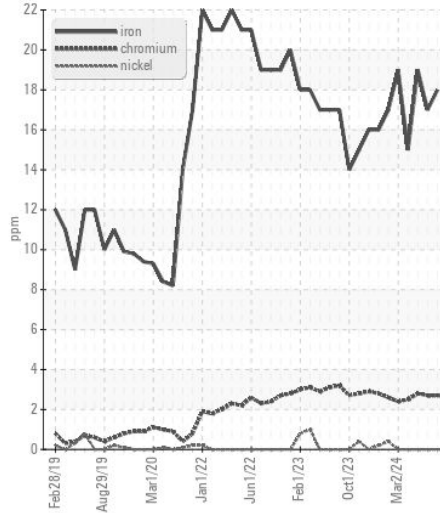
**Base Number**



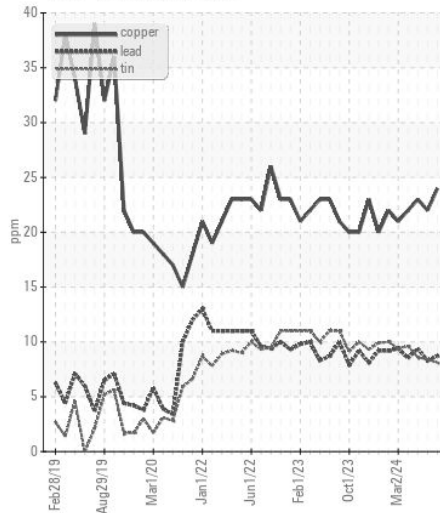
**Viscosity @ 100°C**



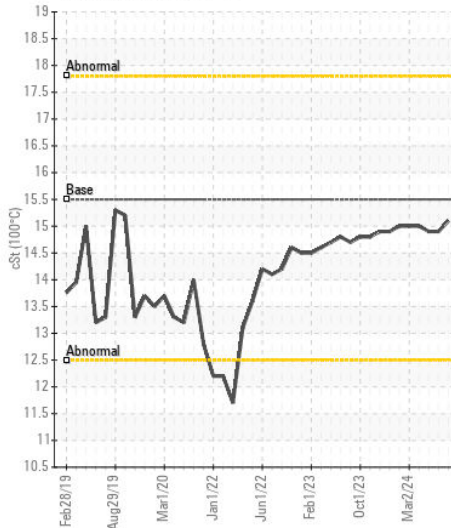
**Ferrous Alloys**



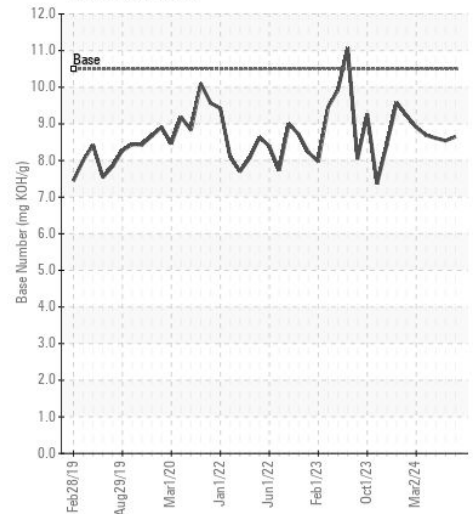
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : MW0070783

**Lab Number** : 06237079

**Unique Number** : 11125913

**Test Package** : MAR 2

**Received** : 15 Jul 2024

**Tested** : 17 Jul 2024

**Diagnosed** : 17 Jul 2024 - Wes Davis

**INGRAM BARGE**

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: JUSTIN WHEELER

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)